

ABSTRACT

Luthfiana, Ilfa. 2014. **Influence Of the Concentration and Long Immersion in Calcium Chloride (CaCl_2) Against Maturity and Quality of Fruit Banana Ambon Yellow (*Musa Paradisiaca* Var. Sapiantum).** Thesis. the Faculty of Biological Science and Technology Islamic State University Maulana Malik Ibrahim Unfortunate. Tutorship: Ir. Liliek Harianie AR, M.P. and Dr. H. Ahmad Barizi, M.A

Keywords: Calcium Chloride (CaCl_2), Fruit Banana Ambon Yellow (*Musa Paradisiaca* Var. Sapiantum), Ripeness (Color, Texture), the Quality of Fruit (The Water Level, The Sugar Content of Reduction, Levels of Calcium)

A banana ambon yellow (*Musa paradisiaca* Var. Sapiantum) including one of the leaders product horticulture in Indonesia which could easily damaged (perishable) because it still for the process of respiration and transpiration although fruit has been harvested as a result the fruit suffered a setback quality and physiological damage. One of the techniques that can be in apply them to slow the process of respiration and transpiration is by means of soaking fruit into a solution of calcium chloride (CaCl_2). This research aims to know the: (1) effect of calcium chloride concentration (CaCl_2) are different to the maturation and quality of the fruit banana ambon yellow (*Musa paradisiaca* Var. Sapiantum.) (2) effect of long immersion in a solution of calcium chloride (CaCl_2) are different to the maturation, and quality (*Musa paradisiaca* Var. Sapiantum.). (3) the influence of the interaction between concentration and long soaking in a solution of different calcium chloride (CaCl_2) towards maturation, and and quality banana yellow fruit ambon (*Musa paradisiaca* Var. Sapiantum.).

This research conducted in february - march 2014 in the Laboratory of Plant Physiology and Biochemical of Biology Laboratory State Islamic University Maulana Malik Ibrahim Malang and Chemistry Laboratory University Muhammadiyah Malang. This research is are experimental design by using the method Draft Random Complete (DRC) arranged in factorials with 3 times a snapshot exam. The first factors: concentration of calcium chloride (CaCl_2) 0 %, 4 %, and 8 %. The second factor that is long immersion banana ambon yellow fruit 60 minute, 90 minutes, and 120 minutes. Data obtained analyzed by ANOVA *two way* with standard trust (5 %).

The results showed that, (1) there is a concentration of calcium chloride (CaCl_2) giving influence different maturation and fruit quality of banana ambon yellow (*Musa paradisiaca* Var. Sapiantum). Concentrations of calcium chloride 8% is the best for being able to push the process of maturation of the fruit (fruit colour change and tenderness texture), otherwise it can maintain the quality of the fruit include moisture content, the reduction of sugar levels and total calcium in the flesh of the fruit until the 12th day. (2) Any influence long immersion banana fruit in calcium chloride (CaCl_2) against ripening of fruit banana yellow ambon and the quality (*Musa paradisiaca* Var. Sapiantum). Long immersion best namely during 120 minutes, with the results maturation process of fruit can be slowed down and the quality of its could be maintained until the day of observation 12th. (3) the interaction between concentration and long submersion different against ripening fruit and quality banana ambon yellow (*Musa paradisiaca* var. Sapiantum). The interaction concentration of calcium chloride 8 % with long immersion 90 minutes and concentration calcium chloride 4 % with long immersion 90 minutes is good treatment, with the result the low value of the color change on the 12th day of observations, but the tenderness texture, change of starch into sugars and inhibitory process loses water, hasnt distinguished.